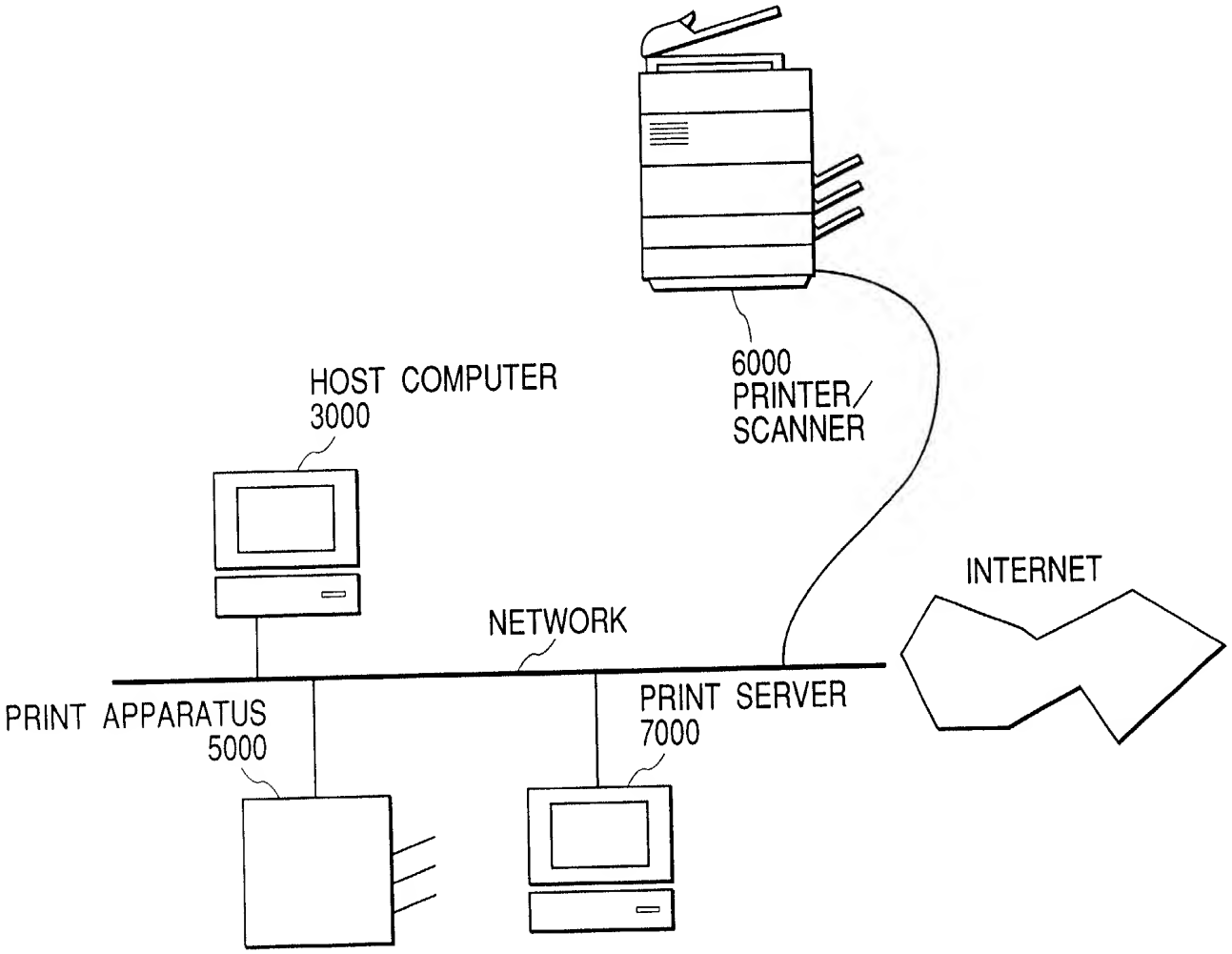
FIG. 1



EL293873318US

09870730.061201

FIG. 2

MC1 : CHARGE PROCESSING APPARATUS

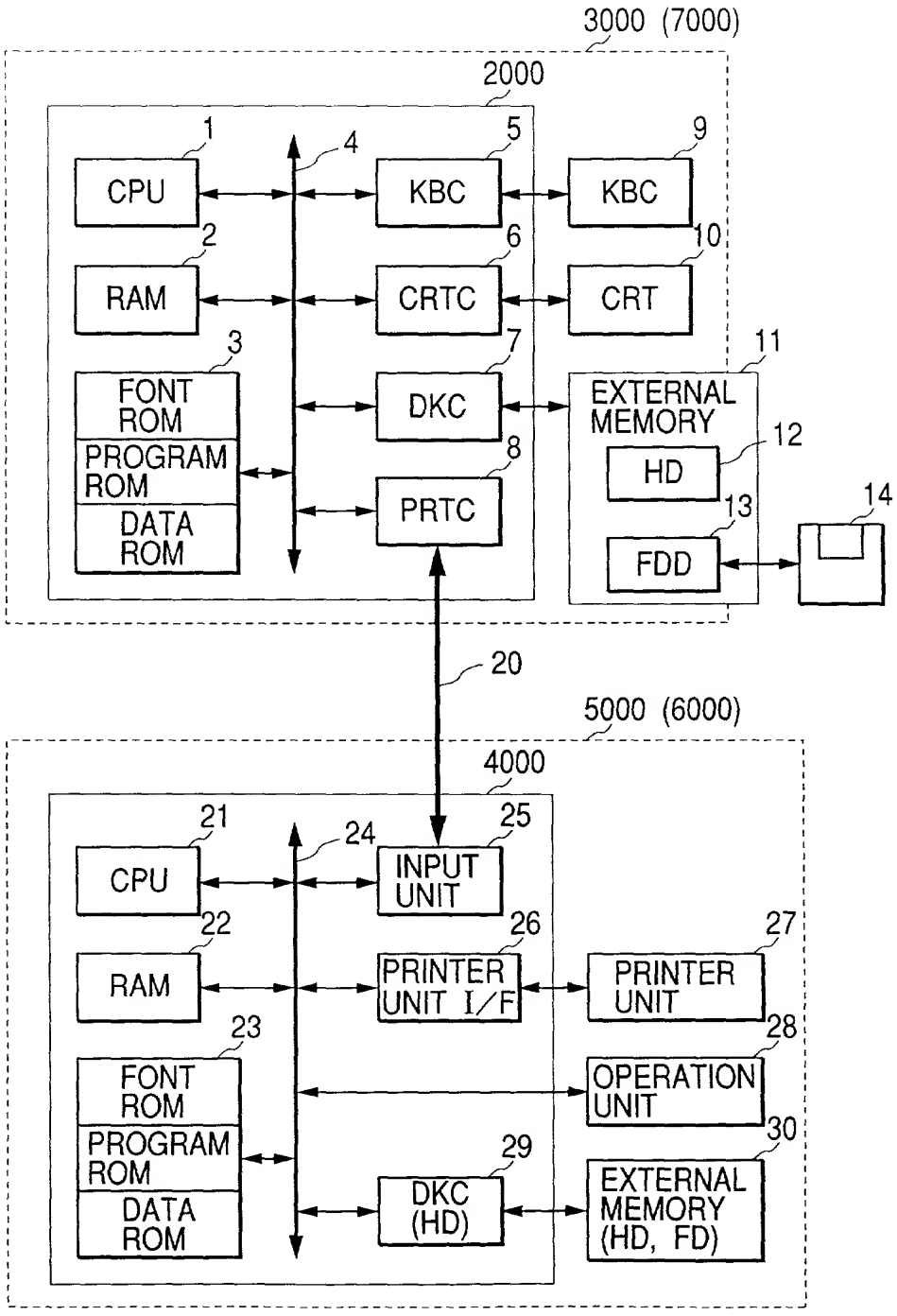


FIG. 3

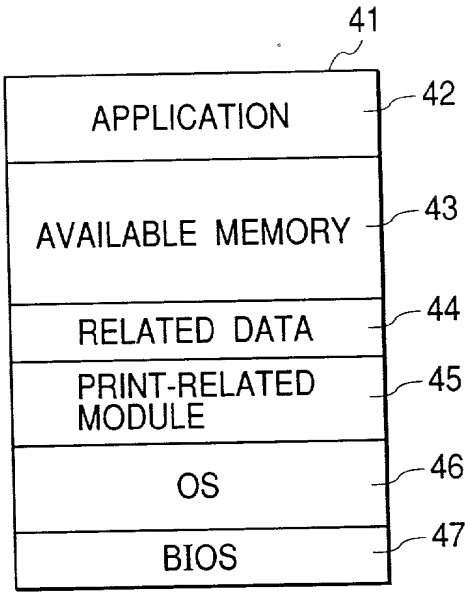

41
APPLICATION
42
AVAILABLE MEMORY
43
RELATED DATA
44
PRINT-RELATED MODULE
45
OS
46
BIOS
47

FIG. 4

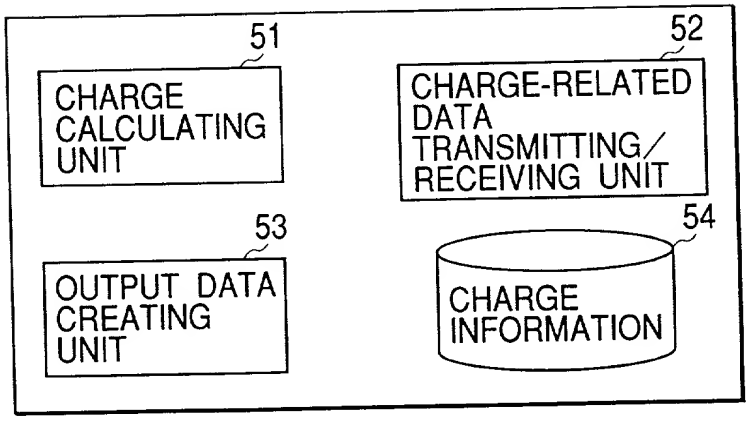

51
CHARGE CALCULATING UNIT
52
CHARGE-RELATED DATA TRANSMITTING/ RECEIVING UNIT
53
OUTPUT DATA CREATING UNIT
54
CHARGE INFORMATION

FIG. 5

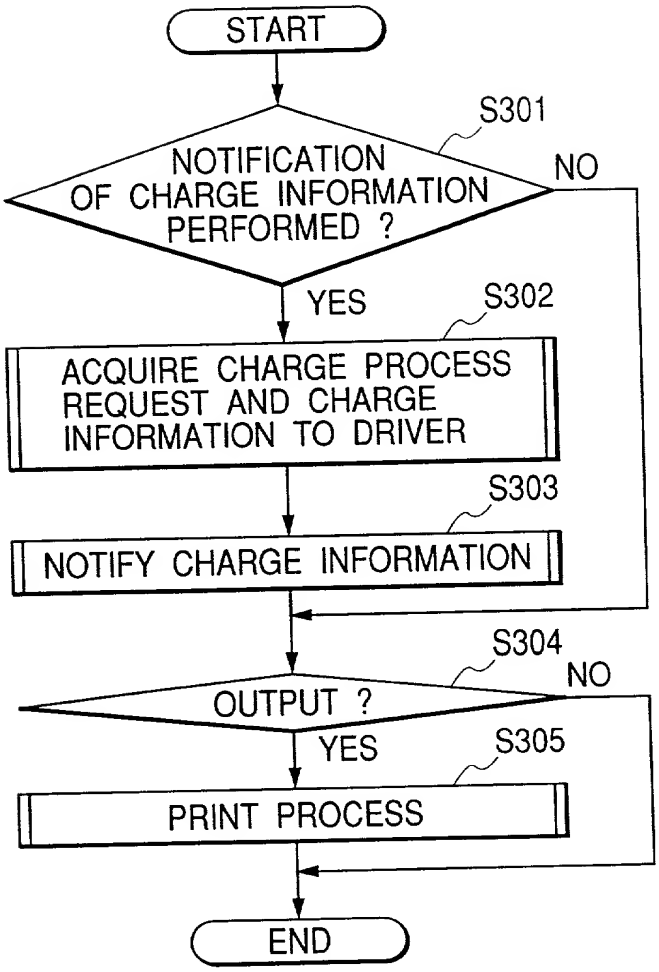

START
S301
NOTIFICATION OF CHARGE INFORMATION PERFORMED ?
NO
YES
S302
ACQUIRE CHARGE PROCESS REQUEST AND CHARGE INFORMATION TO DRIVER
S303
NOTIFY CHARGE INFORMATION
S304
OUTPUT ?
NO
YES
S305
PRINT PROCESS
END

FIG. 6

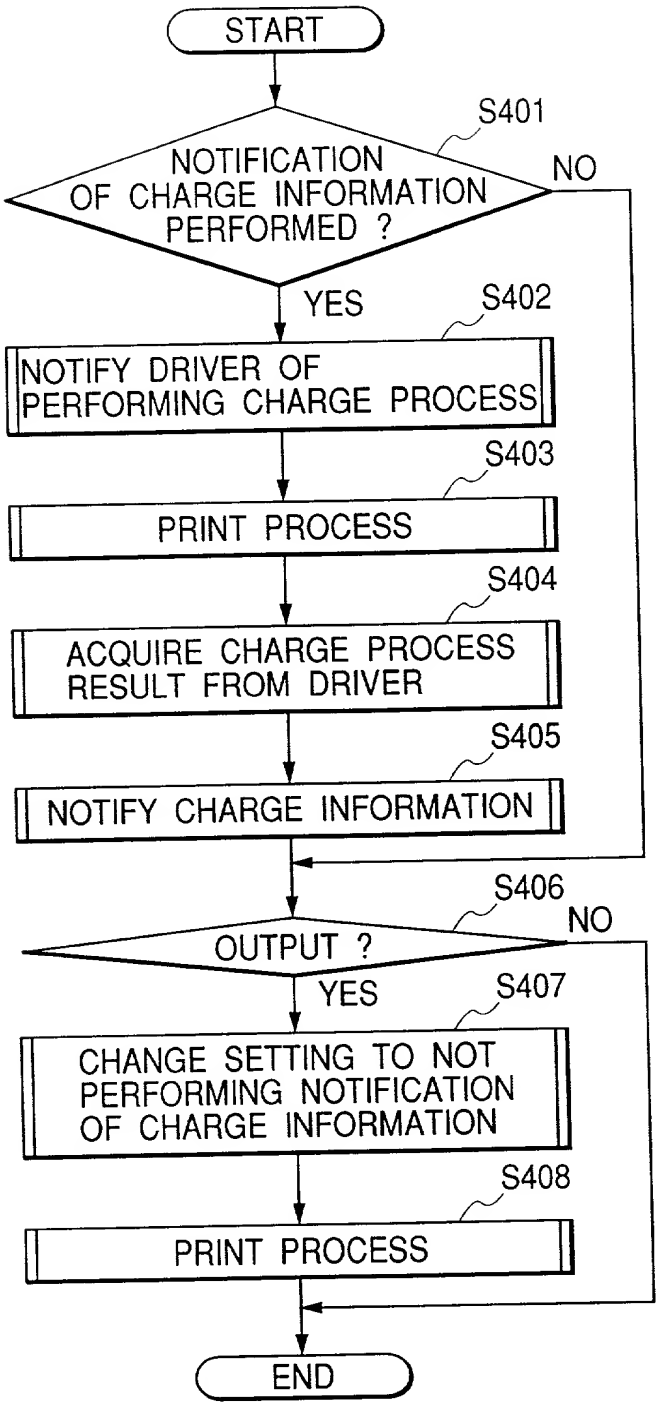

START
S401
NOTIFICATION OF CHARGE INFORMATION PERFORMED ?
NO
YES
S402
NOTIFY DRIVER OF PERFORMING CHARGE PROCESS
S403
PRINT PROCESS
S404
ACQUIRE CHARGE PROCESS RESULT FROM DRIVER
S405
NOTIFY CHARGE INFORMATION
S406
OUTPUT ?
NO
YES
S407
CHANGE SETTING TO NOT PERFORMING NOTIFICATION OF CHARGE INFORMATION
S408
PRINT PROCESS
END

FIG. 7

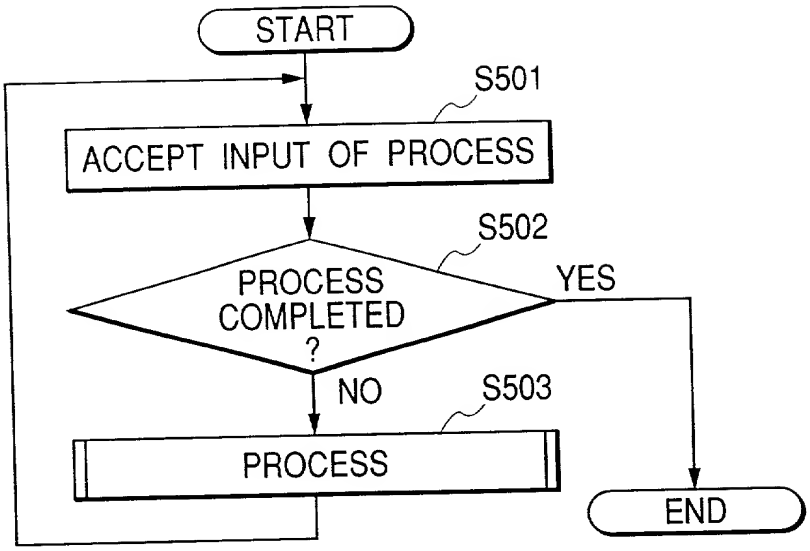

START
S501
ACCEPT INPUT OF PROCESS
S502
PROCESS COMPLETED ?
YES
NO
S503
PROCESS
END

FIG. 8

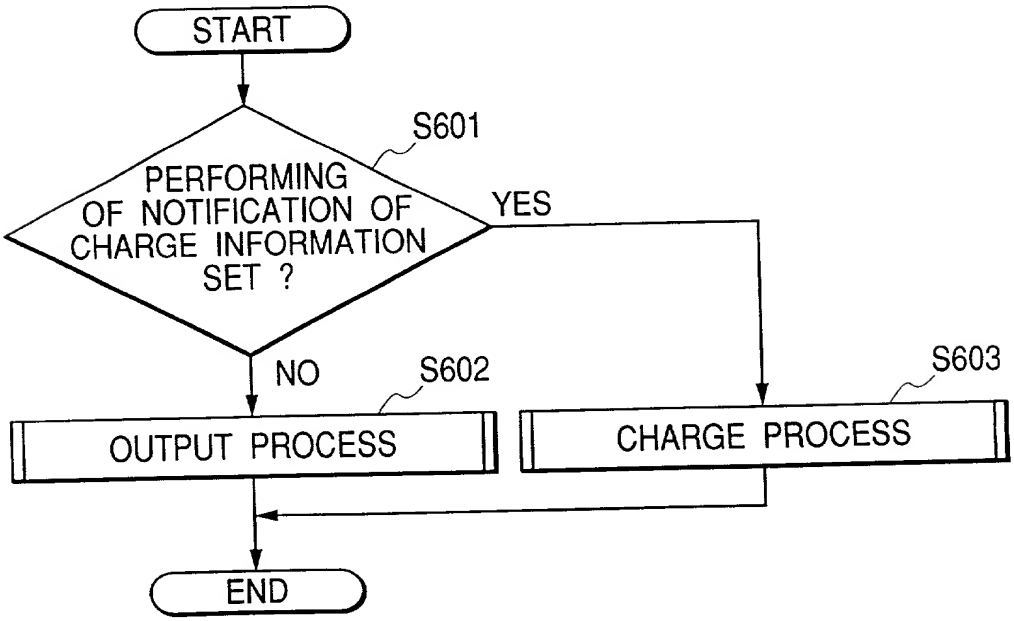

START
S601
PERFORMING OF NOTIFICATION OF CHARGE INFORMATION SET ?
YES
NO
S602
S603
OUTPUT PROCESS
CHARGE PROCESS
END

FIG. 9

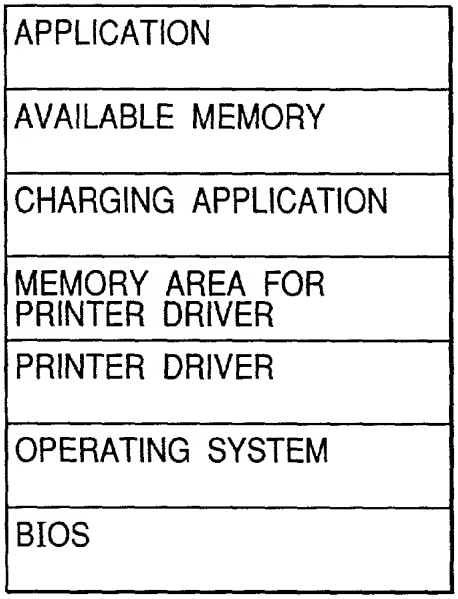

APPLICATION
AVAILABLE MEMORY
CHARGING APPLICATION
MEMORY AREA FOR PRINTER DRIVER
PRINTER DRIVER
OPERATING SYSTEM
BIOS

FIG. 10

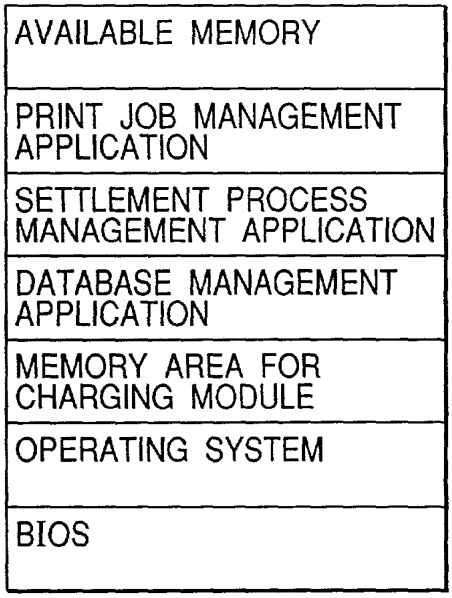

AVAILABLE MEMORY
PRINT JOB MANAGEMENT APPLICATION
SETTLEMENT PROCESS MANAGEMENT APPLICATION
DATABASE MANAGEMENT APPLICATION
MEMORY AREA FOR CHARGING MODULE
OPERATING SYSTEM
BIOS

FIG. 11

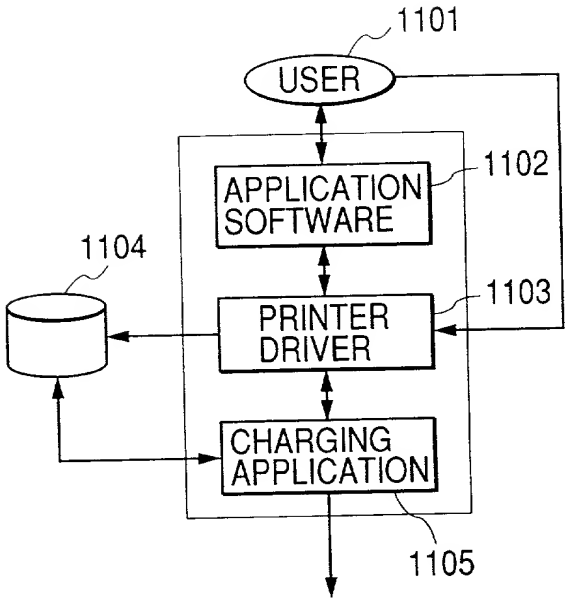

1101
USER
1102
APPLICATION SOFTWARE
1104
1103
PRINTER DRIVER
CHARGING APPLICATION
1105

FIG. 12

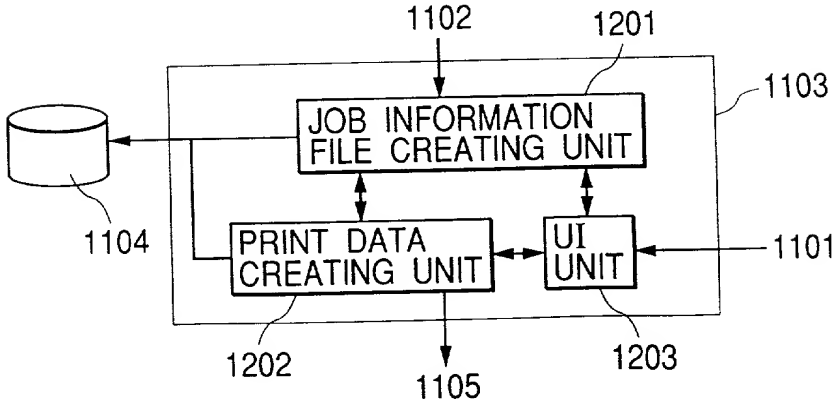

1102
1201
1103
JOB INFORMATION FILE CREATING UNIT
1104
PRINT DATA CREATING UNIT
UI UNIT
1101
1202
1105
1203

FIG. 13

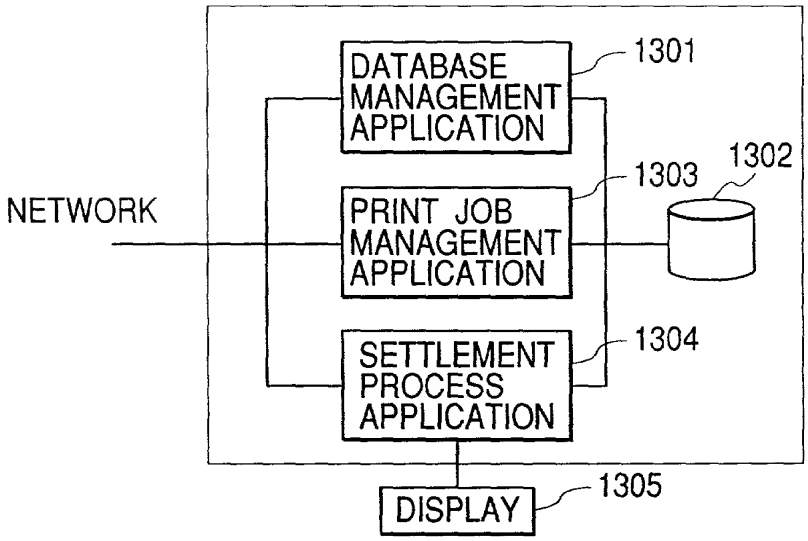


FIG. 14

ATTRIBUTION	ATTRIBUTION VALUE
DATE AND TIME OF LAST UPDATE	2001.01.01
ONE SHEET	10 YEN

1401
1402

FIG. 15

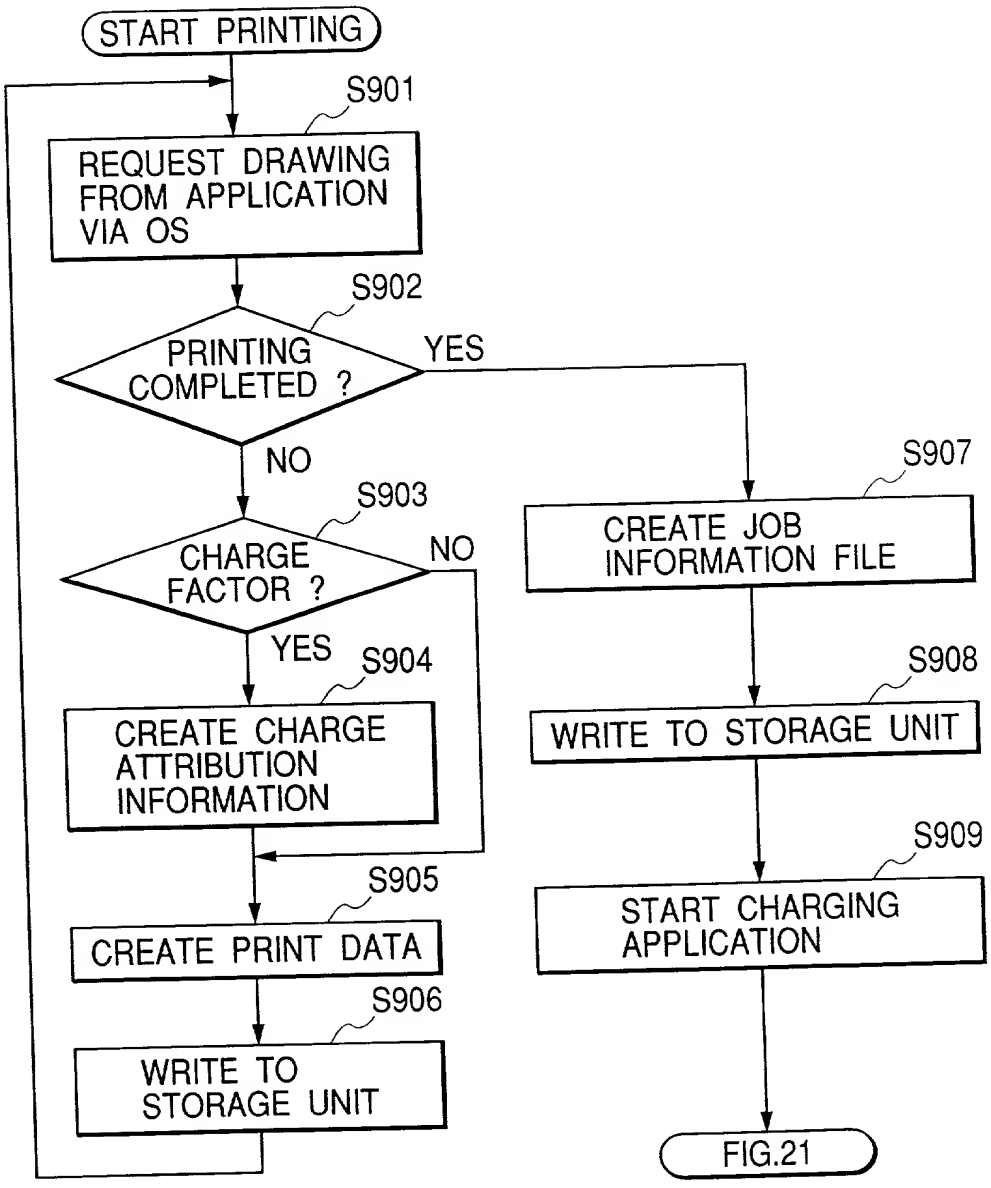

START PRINTING
S901
REQUEST DRAWING FROM APPLICATION VIA OS
S902
PRINTING COMPLETED ?
YES
NO
S903
CHARGE FACTOR ?
NO
YES
S904
CREATE CHARGE ATTRIBUTION INFORMATION
S905
CREATE PRINT DATA
S906
WRITE TO STORAGE UNIT
S907
CREATE JOB INFORMATION FILE
S908
WRITE TO STORAGE UNIT
S909
START CHARGING APPLICATION
FIG.21

FIG. 16

	ATTRIBUTION	VALUE
1001	JOB ID	01234567
1002	DOUBLE-SIDED PRINT	off
1003	PAGE LAYOUT	4in1
1004	NUMBER OF PAGES	0
1005	LOCATION OF CREATED JOB INFORMATION FILE	C:¥Job¥job.file
1006	LOCATION OF CREATED PRINT DATA	C:¥Job¥data.file
	: :	

FIG. 17

	ATTRIBUTION	VALUE
1701	JOB ID	01234567
1702	DOUBLE-SIDED PRINT	on
1703	PAGE LAYOUT	4in1
1704	NUMBER OF PAGES	—
1705	LOCATION OF CREATED JOB INFORMATION FILE	C:¥Job¥job.file
1706	LOCATION OF CREATED PRINT DATA	C:¥Job¥data.file
	: :	

FIG. 18

	ATTRIBUTION	VALUE
	JOB ID	01234567
	DOUBLE-SIDED PRINT	on
1801	PAGE LAYOUT	4in1
	NUMBER OF PAGES	1
	LOCATION OF CREATED JOB INFORMATION FILE	C:¥Job¥job.file
	LOCATION OF CREATED PRINT DATA	C:¥Job¥data.file
	: :	

FIG. 19

1901

ATTRIBUTION	VALUE
JOB ID	01234567
DOUBLE-SIDED PRINT	on
PAGE LAYOUT	4in1
NUMBER OF PAGES	12
LOCATION OF CREATED JOB INFORMATION FILE	C:¥Job¥job.file
LOCATION OF CREATED PRINT DATA	C:¥Job¥data.file
:	:

FIG. 20

2001

```
<JOB ID>
  <jobid=01234567>
</JOB ID>

<DOUBLE-SIDED>
  <duplex=ON>
</DOUBLE-SIDED>

<PAGE LAYOUT>
  <perpage=4>
</PAGE LAYOUT>

<NUMBER OF PAGES>
  <num=12>
</NUMBER OF PAGES>
```

FIG. 21

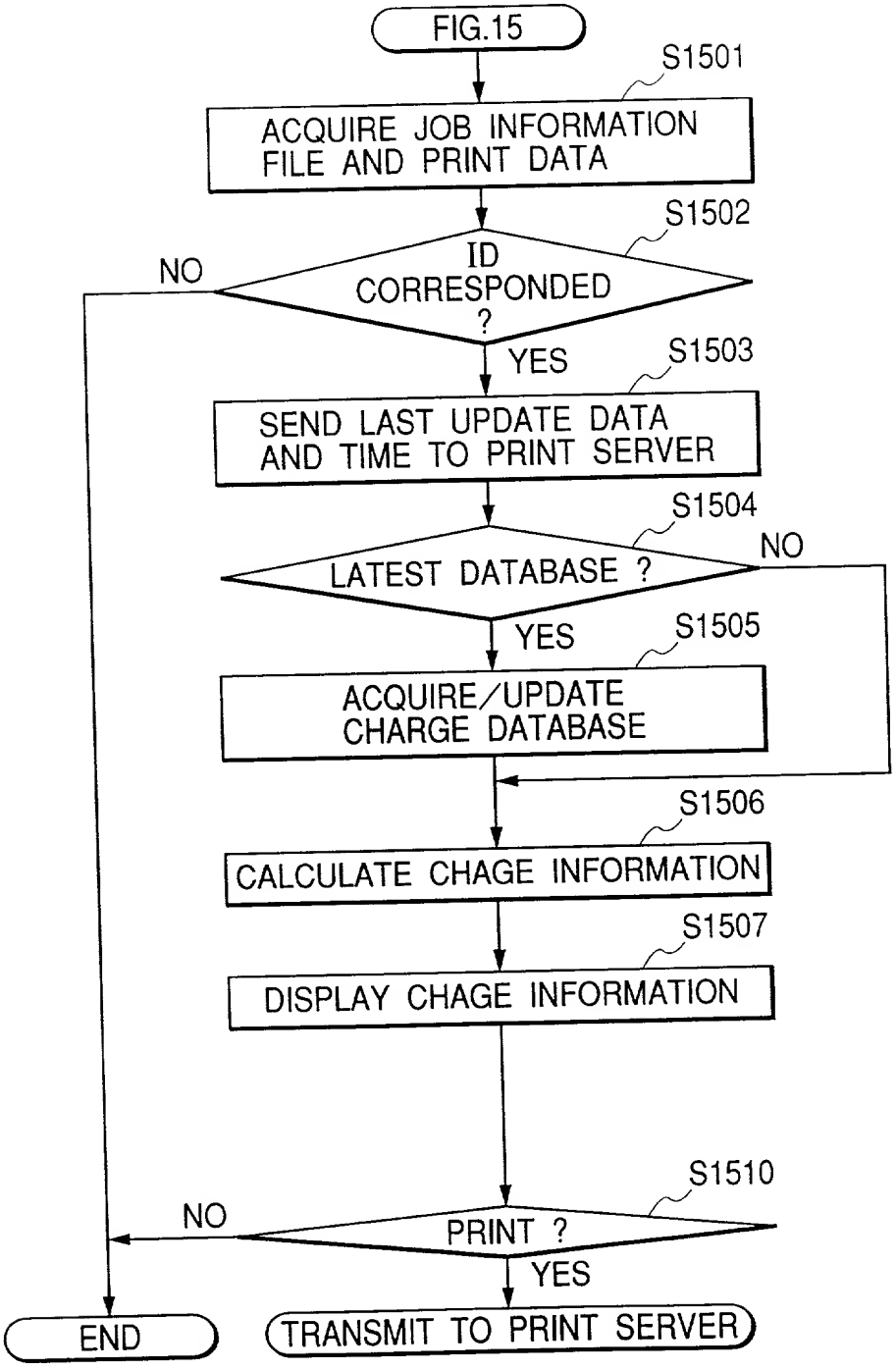


FIG.15
S1501
ACQUIRE JOB INFORMATION FILE AND PRINT DATA
S1502
ID CORRESPONDED ?
NO
YES
S1503
SEND LAST UPDATE DATA AND TIME TO PRINT SERVER
S1504
LATEST DATABASE ?
NO
YES
S1505
ACQUIRE/UPDATE CHARGE DATABASE
S1506
CALCULATE CHAGE INFORMATION
S1507
DISPLAY CHAGE INFORMATION
S1510
PRINT ?
NO
YES
END
TRANSMIT TO PRINT SERVER

FIG. 22

ATTRIBUTION	ATTRIBUTION VALUE
DATE AND TIME OF LAST UPDATE	1999.01.01
ONE SHEET	5 YEN

2201
2202

FIG. 23

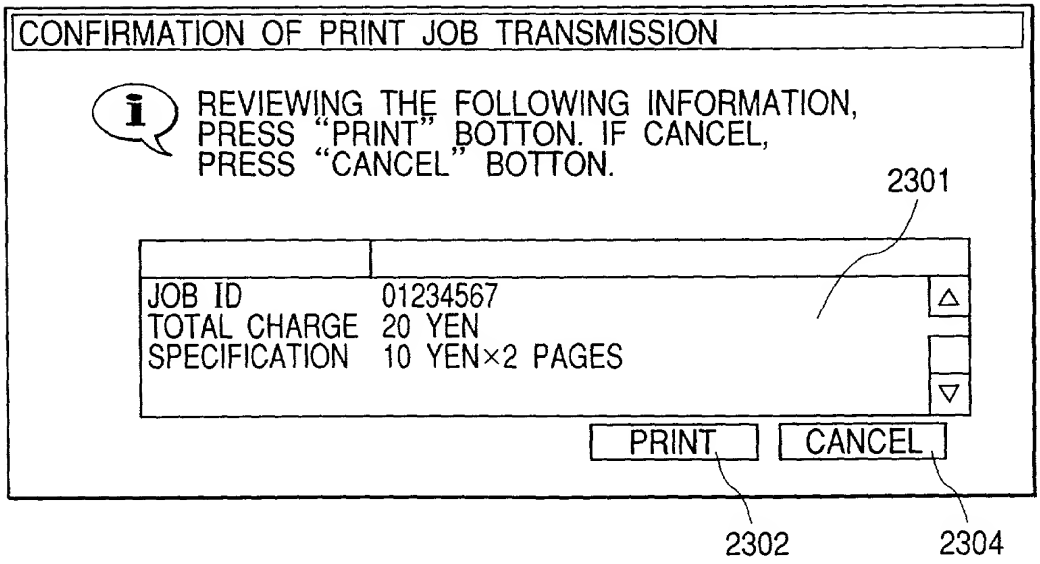


FIG. 24

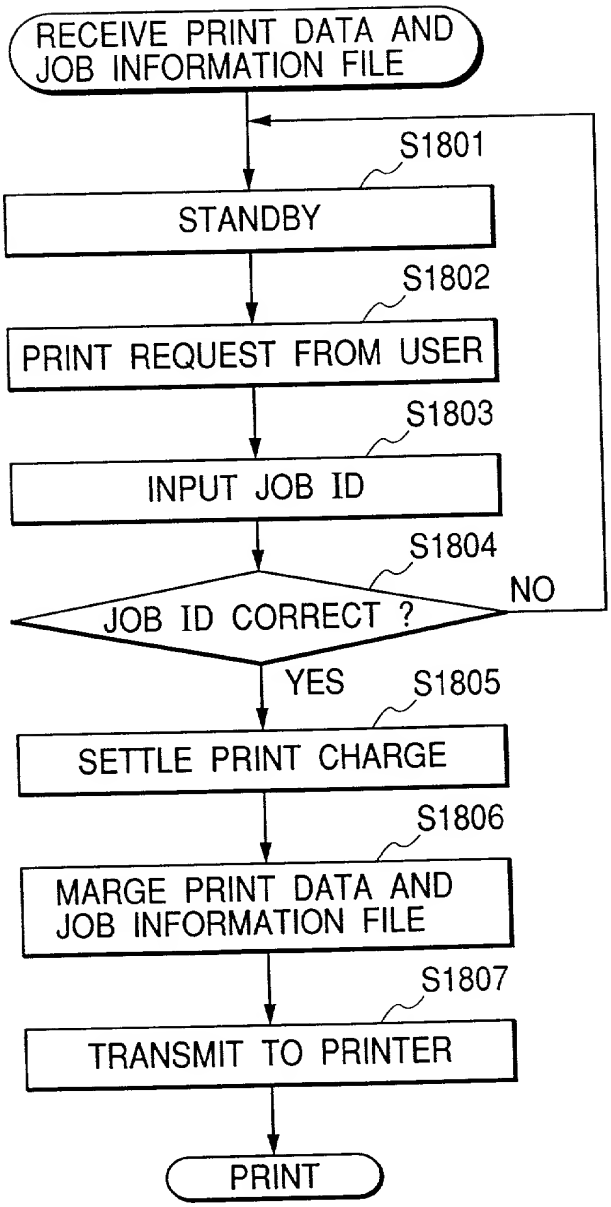

RECEIVE PRINT DATA AND JOB INFORMATION FILE
S1801
STANDBY
S1802
PRINT REQUEST FROM USER
S1803
INPUT JOB ID
S1804
JOB ID CORRECT ?
NO
YES
S1805
SETTLE PRINT CHARGE
S1806
MARGE PRINT DATA AND JOB INFORMATION FILE
S1807
TRANSMIT TO PRINTER
PRINT

FIG. 25

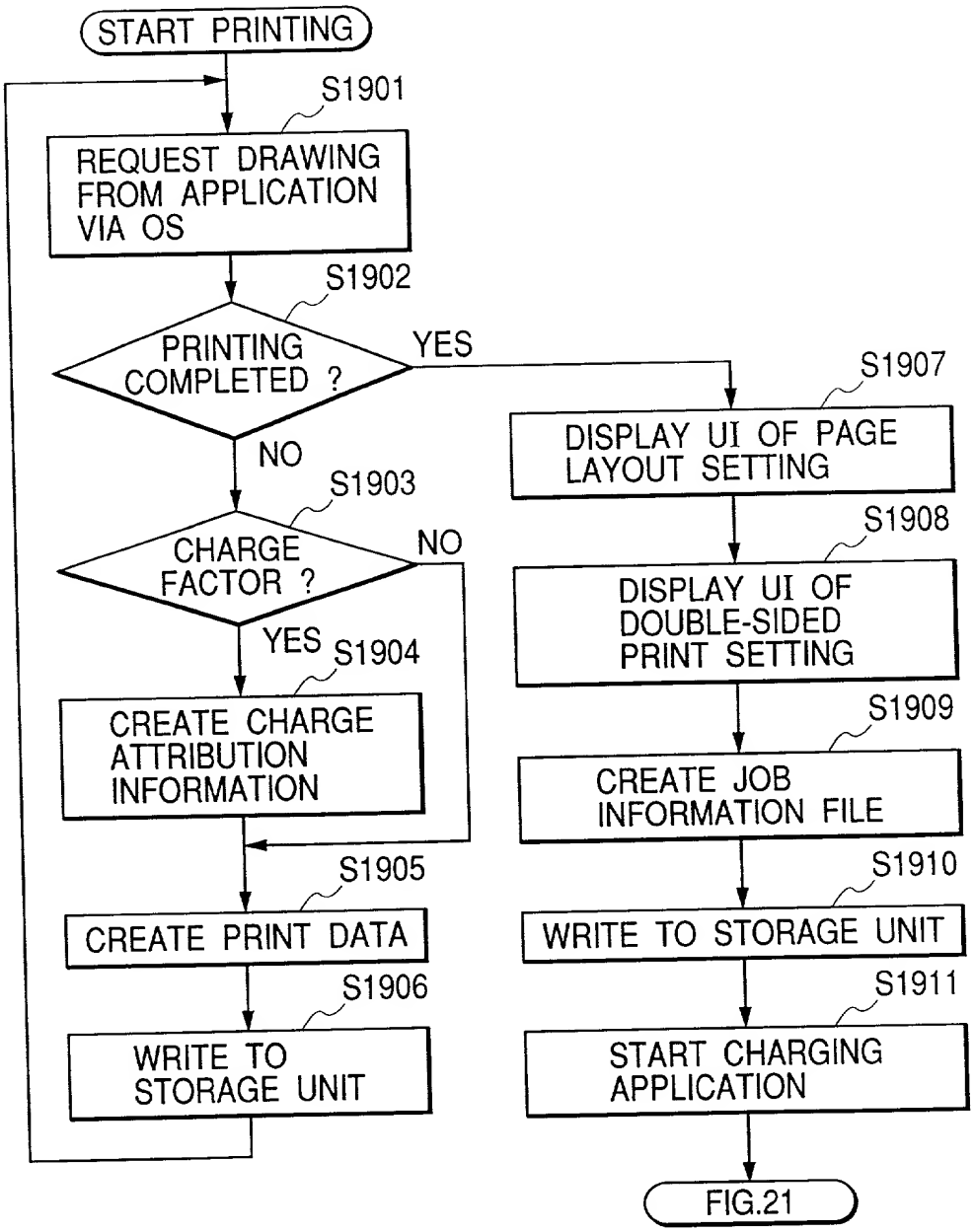

START PRINTING
S1901
REQUEST DRAWING FROM APPLICATION VIA OS
S1902
PRINTING COMPLETED ?
YES
NO
S1903
CHARGE FACTOR ?
NO
YES
S1904
CREATE CHARGE ATTRIBUTION INFORMATION
S1905
CREATE PRINT DATA
S1906
WRITE TO STORAGE UNIT
S1907
DISPLAY UI OF PAGE LAYOUT SETTING
S1908
DISPLAY UI OF DOUBLE-SIDED PRINT SETTING
S1909
CREATE JOB INFORMATION FILE
S1910
WRITE TO STORAGE UNIT
S1911
START CHARGING APPLICATION
FIG.21

FIG. 26

	ATTRIBUTION	VALUE
2601	JOB ID	01234567
2602	NUMBER OF PAGES	0
2603	LOCATION OF CREATED JOB INFORMATION FILE	C:¥Job¥job.file
2604	LOCATION OF CREATED PRINT DATA	C:¥Job¥data.file

FIG. 27

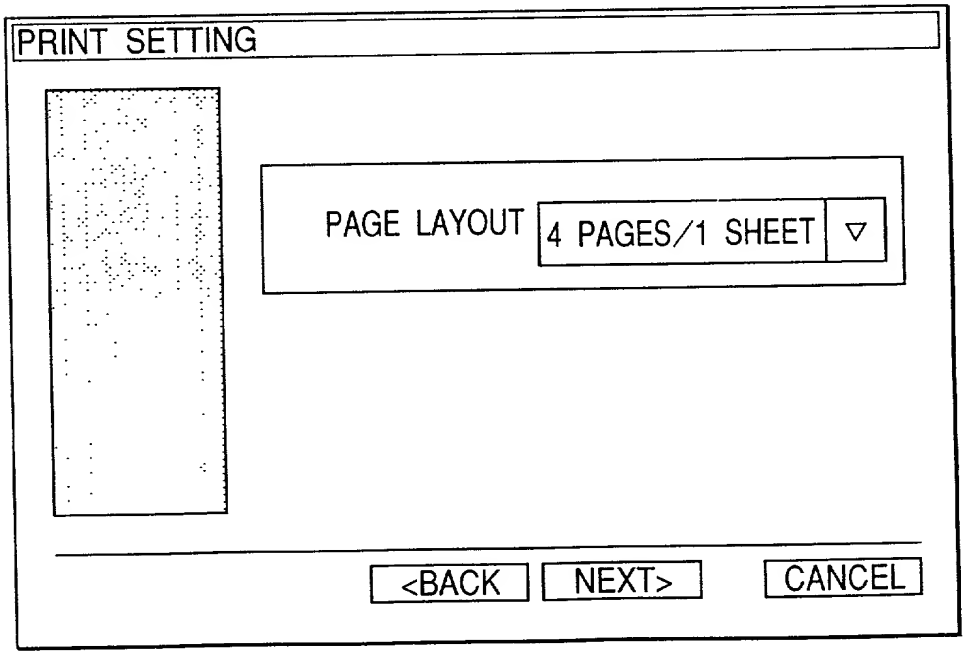


FIG. 28

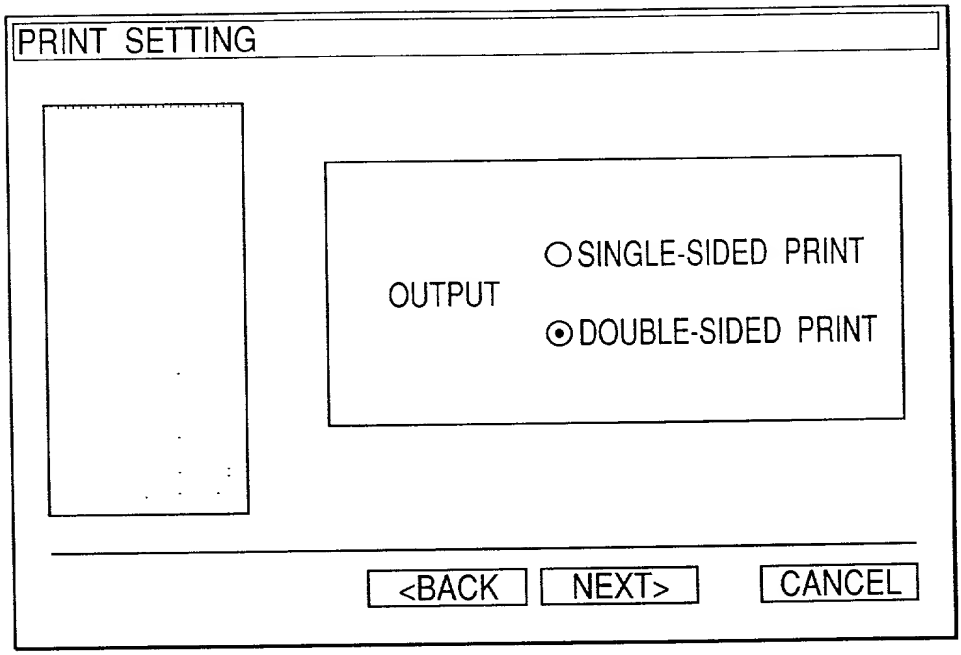


FIG. 29

```
<JOB ID>
  <jobid=01234567>
</JOB ID>

<DOUBLE-SIDED>
  <duplex=ON>
</DOUBLE-SIDED>

<PAGE LAYOUT>
  <perpage=4>
</PAGE LAYOUT>

<NUMBER OF PAGES>
  <num=12>
</NUMBER OF PAGES>
```

FIG. 30

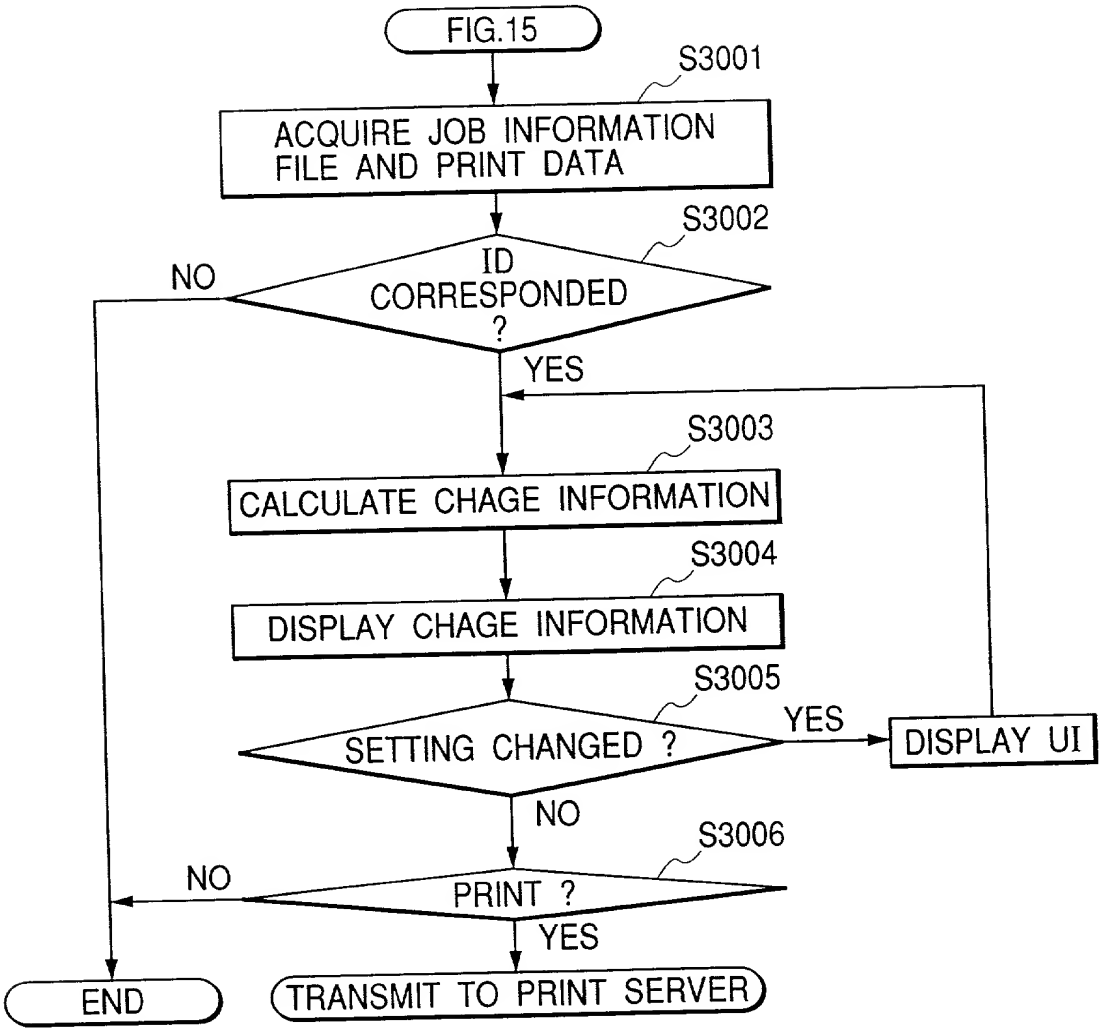


FIG.15
S3001
ACQUIRE JOB INFORMATION FILE AND PRINT DATA
S3002
ID CORRESPONDED ?
NO
YES
S3003
CALCULATE CHAGE INFORMATION
S3004
DISPLAY CHAGE INFORMATION
S3005
SETTING CHANGED ?
YES
DISPLAY UI
NO
S3006
PRINT ?
NO
YES
END
TRANSMIT TO PRINT SERVER

FIG. 31

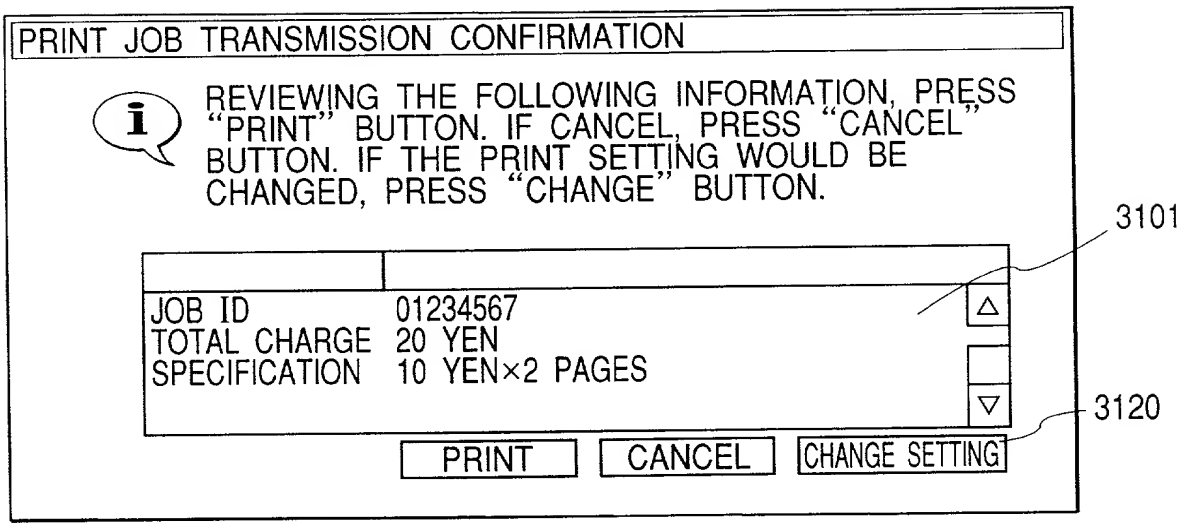

PRINT JOB TRANSMISSION CONFIRMATION
REVIEWING THE FOLLOWING INFORMATION, PRESS "PRINT" BUTTON. IF CANCEL, PRESS "CANCEL" BUTTON. IF THE PRINT SETTING WOULD BE CHANGED, PRESS "CHANGE" BUTTON.
JOB ID 01234567
TOTAL CHARGE 20 YEN
SPECIFICATION 10 YEN×2 PAGES
PRINT
CANCEL
CHANGE SETTING
3101
3120

FIG. 32

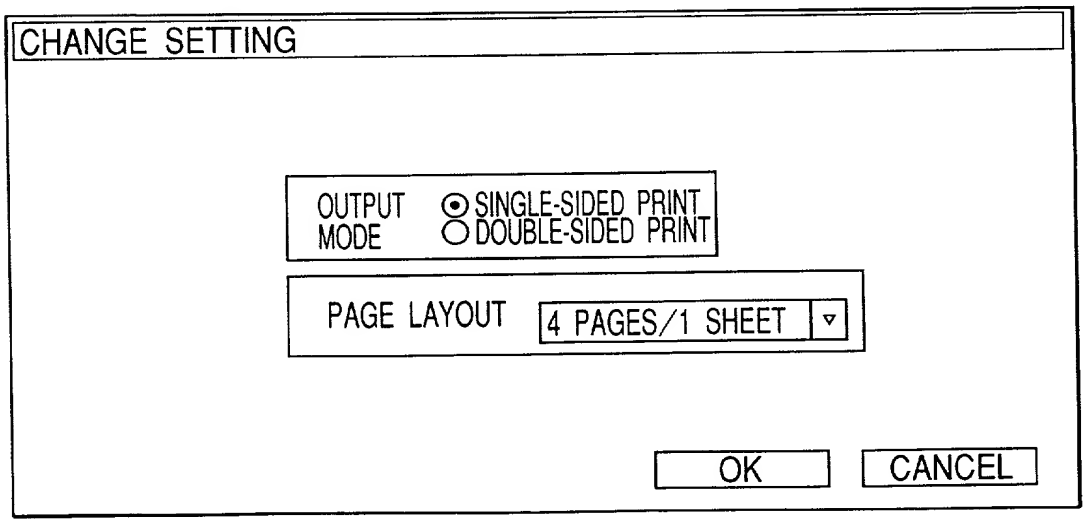

CHANGE SETTING
OUTPUT MODE
SINGLE-SIDED PRINT
DOUBLE-SIDED PRINT
PAGE LAYOUT
4 PAGES/1 SHEET
OK
CANCEL

FIG. 33

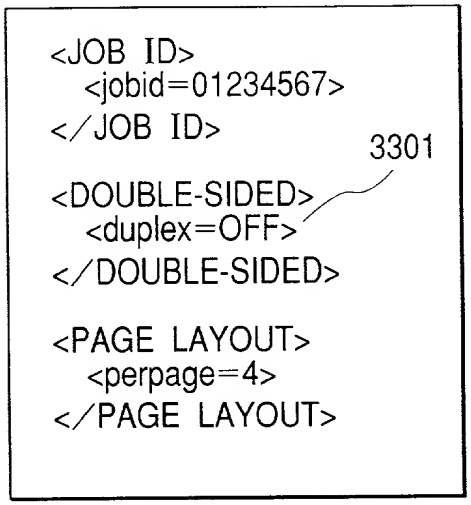

<JOB ID>
<jobid=01234567>
</JOB ID>
3301
<DOUBLE-SIDED>
<duplex=OFF>
</DOUBLE-SIDED>
<PAGE LAYOUT>
<perpage=4>
</PAGE LAYOUT>

FIG. 34

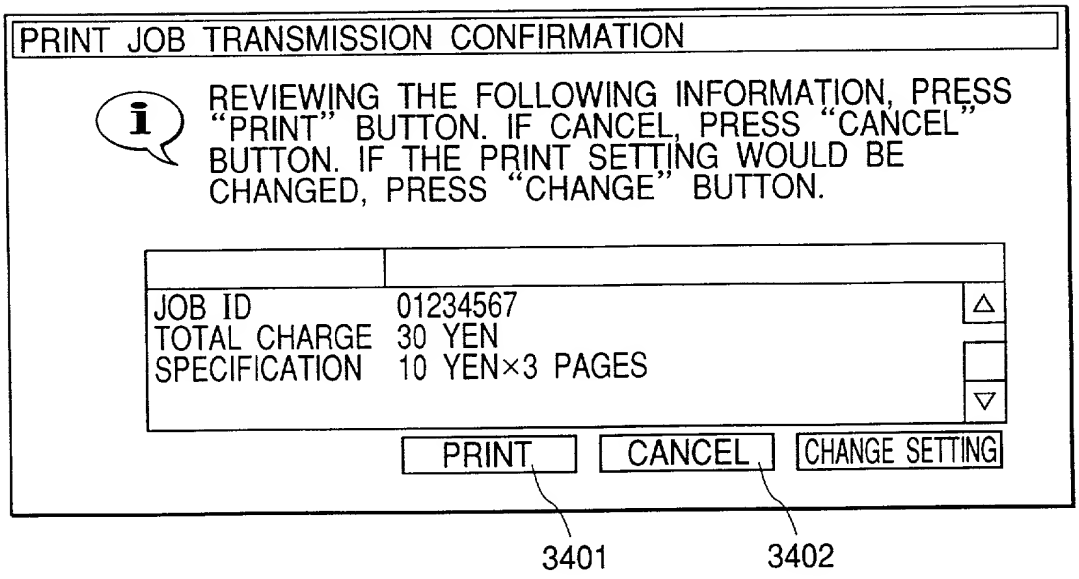

PRINT JOB TRANSMISSION CONFIRMATION
REVIEWING THE FOLLOWING INFORMATION, PRESS "PRINT" BUTTON. IF CANCEL, PRESS "CANCEL" BUTTON. IF THE PRINT SETTING WOULD BE CHANGED, PRESS "CHANGE" BUTTON.
JOB ID 01234567
TOTAL CHARGE 30 YEN
SPECIFICATION 10 YEN×3 PAGES
PRINT
CANCEL
CHANGE SETTING
3401
3402

FIG. 35

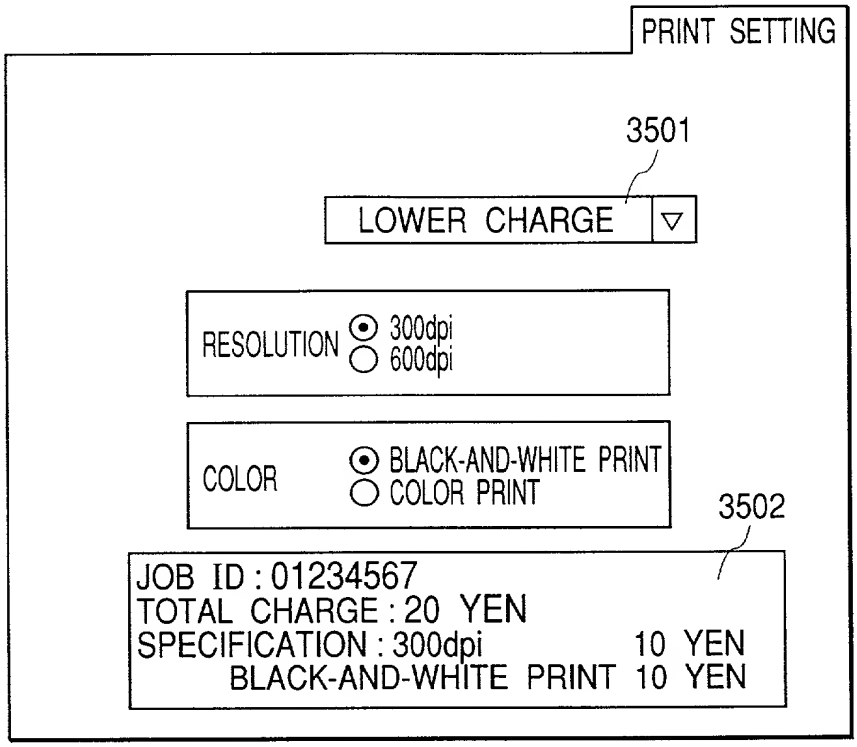
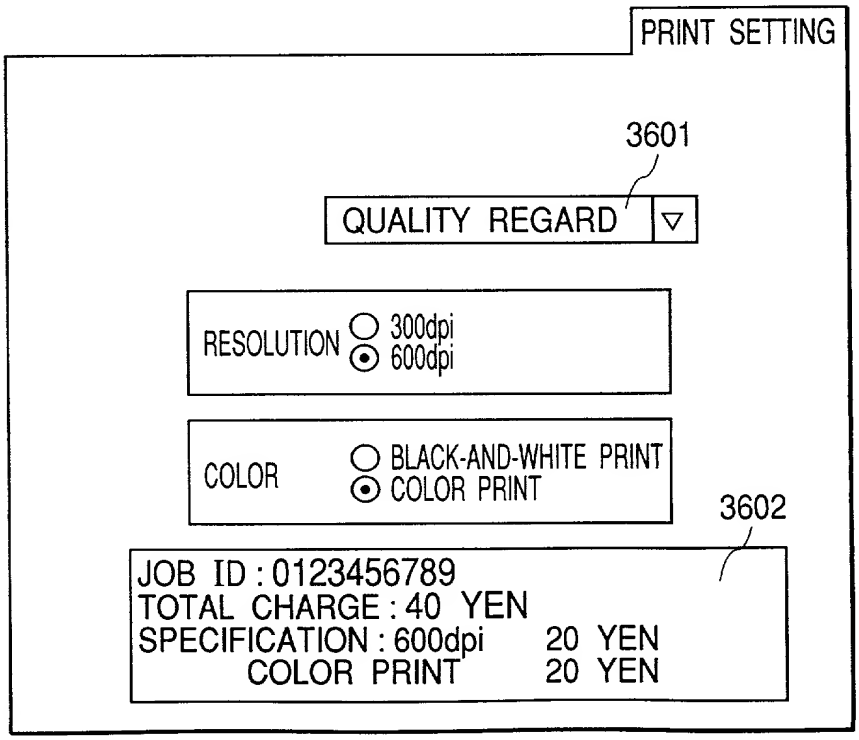

PRINT SETTING
3501
LOWER CHARGE
RESOLUTION
300dpi
600dpi
COLOR
BLACK-AND-WHITE PRINT
COLOR PRINT
3502
JOB ID : 01234567
TOTAL CHARGE : 20 YEN
SPECIFICATION : 300dpi 10 YEN
BLACK-AND-WHITE PRINT 10 YEN

FIG. 36


PRINT SETTING
3601
QUALITY REGARD
RESOLUTION
300dpi
600dpi
COLOR
BLACK-AND-WHITE PRINT
COLOR PRINT
3602
JOB ID : 0123456789
TOTAL CHARGE : 40 YEN
SPECIFICATION : 600dpi 20 YEN
COLOR PRINT 20 YEN